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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,108	05/22/2001	Akio Enomoto	791_148	9205
25191	7590	03/15/2004	EXAMINER	
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			MERCADO, JULIAN A	
			ART UNIT	PAPER NUMBER
			1745	
DATE MAILED: 03/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,108

Applicant(s)ENOMOTO ET AL. **Examiner**

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,6,9,10,12-16 and 54-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10, 12-16, 55-63 is/are allowed.
- 6) ☒ Claim(s) 2,3,5,6 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed December 24, 2003.

Claims 2, 3, 5, 6, 9, 10, 12-16 and 54-63 are pending.

This Office action presents a new ground of rejection and is therefore made NON-FINAL.

Claim Objections

The objection to claim 1 is deemed moot in view of the cancellation of this claim.

The objection to claim 6 for lack of antecedent basis has been obviated.

Claim Rejections - 35 USC § 102 and 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 35 U.S.C. 102(b) and 35 U.S.C. 103(a) rejections based on Kita et al. (U.S. Pat. 5,849,431), as would be applicable towards the present claims, have each been withdrawn. The examiner acknowledges applicant's submission of new independent claims 55 and 56 as being modeled after dependent claims 4, 11 and 12, respectively. As dependent claims 4, 11 and 12 were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, any forthcoming rejection of claims 2, 3, 5, 6, 9, 10, 12-16 and 54-63 based on Kita et al. has been obviated.

New Rejection:

As a matter of clarification, the following prior art rejections rescind the examiner's indication of the claimed pressure release hole in a position corresponding to the central axis of the battery winding core or as part of the external terminal member as being allowable.

Claims 5 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Teramoto et al. (U.S. Pat. 5,501,916)

Regarding independent claim 54, Teramoto et al. teaches a lithium secondary cell comprising a hollow co-axial cylindrical winding core [4], an internal electrode body of positive and negative electrodes [5] with a separator [30] interposed therebetween, a non-aqueous electrolyte contained within the cylindrical casing [3a], the cylindrical case being opened at opposing ends and sealed by electrode caps [4A, 4B] on either end. (also applies to claim 5, col. 4 line 53-64, col. 5 line 1-13) The caps have plate members [3B] with a pressure release hole [4C] An external terminal [21, 26] protrudes from the electrode caps and are therefore joined together for construction. Internal terminal members such as lead [7] are shown in Figure 6.

New Rejection:

Claims 2, 3, 5, 6 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-162801 in view of Yamamoto (U.S. Pat. 5,474,752).

For purposes of detailed discussion the machine translation of JP '801 is relied upon. Regarding independent claim 54, JP '801 teaches a secondary cell comprising an internal electrode body including a hollow co-axial cylindrical winding core [13], positive and negative

electrodes of an electrode structure [10] with a separator [12] disposed therebetween, a nonaqueous electrolytic solution contained within a cell case [1], the case being opened at opposing ends by “cleavage valves” [4]. ([par. 0014], also applies to dependent claim 5) At each opposing end are electrode caps having terminal members [2, 3]. (Figure 1a) The electrode caps have a plate member, shown as a flat circular member in Figure 1a and in cross-section in Figure 1b, with a protruding external terminal member [2,3] as shown in Figure 1b. The cleavage valves [4] function as hollow-portioned pressure release holes within the external terminal member, “the cleavage valve 4 [is] for emitting the gas which occurred inside the cell”. (par. [0014], also applies to dependent claim 6) JP ‘801 recites that “[t]he positive electrode of the electrode structure 10 is connected to an anode terminal, and the negative electrode is connected is connected to the cathode terminal”. (par. [0014]) Consistent therewith, JP ‘801 illustrates internal terminal members of a shape similar to “<” connecting the internal electrode body [10] with the end terminals, as see in Figure 1b. Figure 1b further illustrates that the plate member [2], the external terminal member and the internal terminal members are joined together.

As to dependent claims 2 and 3 which recite product-by-process limitations of, e.g. “produced by press processing or cold forging” or “produced by a method selected from the group consisting of friction bonding”, these process limitation have not been given patentable weight, as the limitations do not give breadth or scope to the product claim. The claimed product appears to be the same or similar to the prior art product insofar as the plate members, external terminal members, internal terminal members, pressure release hole, cell case and electrode cap being joined together as part of a unitary battery structure, as shown by JP ‘801. In the event that any differences can be shown by the product of the product-by-process claims 2 and 3, such

differences would have been obvious to the skilled artisan as a routine modification of the product absent of a showing of unexpected results. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

JP '801 does not explicitly teach the secondary cell in JP '801 as a lithium secondary cell. However, Yamamoto teaches that lithium secondary cells are superior over other types of secondary batteries such as that of the nickel cadmium or lead acid types. (col. 1 line 10-20) Thus, the skilled artisan would find obvious to employ lithium as the active material in the secondary cell of JP '801. The motivation for such a modification would be to employ a secondary battery having a high battery voltage, high energy density, low self-discharge and high cycling capabilities. (col. 1 line 31-33)

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teramoto et al. as applied for claims 5 and 54 above.

The teachings of Teramoto et al. are discussed above.

As to dependent claims 2 and 3 which recite product-by-process limitations of, e.g. “produced by press processing or cold forging” or “produced by a method selected from the group consisting of friction bonding”, for similar reasons as set forth in ground of rejection based on JP '801 these process limitation have not been given patentable weight, as the limitations do not give breadth or scope to the product claim. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

Allowable Subject Matter

New independent claims 55 and 56 are allowed for the reasons set forth in the prior Office action for claims 4, 11 and 12, respectively. Dependent claims 9, 10, 12-16 and 57- 63 are allowed as being dependent upon an allowed base claim.

Double Patenting

The obviousness-type double patenting rejection based on copending Application No. 09/819,329 has been obviated by applicant's amendment to the '329 application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Handwritten signature, possibly reading "Jam".



Patrick Davis
Supervisory Patent Examiner
Technology Center